IN THE CLAIMS

Please cancel claims 4 and 22 without prejudice or disclaimer, and amend the claims as follows:

1.   (Currently Amended) A method comprising:

receiving a video stream comprising a plurality of image frames, each image frame comprising a matrix of pixels;

selecting a subset of the image frames;

for each image frame in the subset determining a sub-fingerprint for the image frame, wherein determining the sub-fingerprint for the image frame includes:

computing a discrete cosine transformation (DCT) block for a pixel block surrounding a pixel, said DCT block having coefficients,

computing an estimation of a variance of the coefficients,

setting a variance value in a variance matrix with the estimation of the variance, wherein the value is set at a position in the variance matrix corresponding to the pixel position in the image frame matrix,

determining a minimum variance value in a signature window of the variance matrix enclosing the pixel position, and

setting a first predetermined value representing the minimum variance in a constellation matrix at a position corresponding to the minimum variance value and setting all other positions in the signature window to a different predetermined value; and

assembling the sub-fingerprints into a fingerprint for the video stream.

2.   (Original) The method of claim 1, further comprising:

transmitting the fingerprint to a fingerprint verification system; and

comparing the fingerprint to a predetermined fingerprint for the video stream.

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3.   (Original) The method of claim 1, wherein selecting the subset of the image frames includes reading control codes from the video stream, said control codes identifying the subset of the image frames.

4.   (Canceled)

5.   (Currently Amended) The method of claim [[4]] 1, further comprising encoding the sub-fingerprint.

6.   (Original) The method of claim 5, wherein the encoding comprises a run-length encoding.

7.   (Currently Amended) The method of claim [[4]] 1, wherein the DCT block has a size of eight by eight.

8.   (Currently Amended) The method of claim [[4]] 1, wherein the signature window has a size of eight by eight.

9.   (Original) A device comprising:

     a processor;

     a network interface module operable to receive video data, the video data comprising a plurality of frames, each frame comprising a pixel matrix;

     a memory coupled to the processor for storing the pixel matrix, a variance matrix, and a constellation matrix; and

     a fingerprint generation module executing on the processor and operable to:

          determine a discrete cosine transformation (DCT) block for a pixel block surrounding a pixel in the pixel matrix, said DCT block having coefficients;

          compute an estimation of a variance of the coefficients;

        set a variance value in the variance matrix with the estimation of the variance, wherein the value is set at a position in the variance matrix corresponding to the pixel position in the image frame matrix;

        determine a minimum variance value in a signature window of the variance matrix enclosing the pixel position; and

        set a first predetermined value representing the minimum variance in the constellation matrix at a position corresponding to the minimum variance value and setting all other positions in the signature window to a different predetermined value.

10.   (Original) The device of claim 9, wherein the fingerprint generation module is further operable to run-length encode the sub-fingerprint.

11.   (Original) The device of claim 9, wherein the DCT block has a size of eight by eight.

12.   (Original) The device of claim 9, wherein the signature window has a size of eight by eight.

13.   (Original) The device of claim 9 further comprising a DCT accelerator operable to calculate the DCT coefficients.

14.   (Original) The device of claim 9, wherein the processor and memory are housed in a set-top box.

15.   (Original) The device of claim 9, wherein the processor and memory are housed in a personal computer.

16.   (Currently Amended) A system comprising

a video server communicably coupled to a communication channel and operable to transmit a video data stream through the communication channel;

a video receiver communicably coupled to the communication channel and operable to:

receive the video data stream;

determine a subset of images in the video data stream;

calculate a sub-fingerprint for each of the subset of images, wherein the calculations of the sub-fingerprint for the image frame includes operations to:

compute a discrete cosine transformation (DCT) block for a pixel block surrounding a pixel, said DCT block having coefficients,

compute an estimation of a variance of the coefficients,

set a variance value in a variance matrix with the estimation of the variance, wherein the value is set at a position in the variance matrix corresponding to the pixel position in the image frame matrix,

determine a minimum variance value in a signature window of the variance matrix enclosing the pixel position, and

set a first predetermined value representing the minimum variance in a constellation matrix at a position corresponding to the minimum variance value and setting all other positions in the signature window to a different predetermined value;

assemble the sub-fingerprint for each of the subset of images into a fingerprint; and

transmit the fingerprint to a fingerprint verification module.

17.   (Original) The system of claim 16, further comprising a fingerprint mismatch database operable to store a reference fingerprint for the video data stream and wherein the fingerprint verification module is operable to compare the fingerprint to the reference fingerprint.

18.   (Original) The system of claim 16, wherein the fingerprint verification module is located with the video server.

19.   (Currently Amended) A machine-readable medium having machine executable instructions for performing a method, the method comprising:

receiving a video stream comprising a plurality of image frames, each image frame comprising a matrix of pixels;

selecting a subset of the image frames;

for each image frame in the subset determining a sub-fingerprint for the image frame, wherein determining the sub-fingerprint for the image frame includes:

computing a discrete cosine transformation (DCT) block for a pixel block surrounding a pixel, said DCT block having coefficients,

computing an estimation of a variance of the coefficients,

setting a variance value in a variance matrix with the estimation of the variance, wherein the value is set at a position in the variance matrix corresponding to the pixel position in the image frame matrix,

determining a minimum variance value in a signature window of the variance matrix enclosing the pixel position, and

setting a first predetermined value representing the minimum variance in a constellation matrix at a position corresponding to the minimum variance value and setting all other positions in the signature window to a different predetermined value; and

assembling the sub-fingerprints into a fingerprint for the video stream.

20.   (Original) The machine-readable medium of claim 19, wherein the method further comprising:

transmitting the fingerprint to a fingerprint verification system; and

comparing the fingerprint to a predetermined fingerprint for the video stream.

21.   (Original) The machine-readable medium of claim 19, wherein selecting the subset of the image frames includes reading control codes from the video stream, said control codes identifying the subset of the image frames.

22.   (Canceled)

23.   (Currently Amended) The machine-readable medium of claim [[22]] 19, wherein the
method further comprises encoding the sub-fingerprint.

24.   (Original) The machine-readable medium of claim 23, wherein the encoding comprises a
run-length encoding.

25.   (Currently Amended) The machine-readable medium of claim [[22]] 19, wherein the
DCT block has a size of eight by eight.

26.   (Currently Amended) The machine-readable medium of claim [[22]] 19, wherein the
signature window has a size of eight by eight.